

REMARKS

Claims 1-8, as amended, remain herein. Claims 9 and 10 remain herein but are presently withdrawn from consideration subject to an election of species requirement.

Claims 1, 2, 4 and 6 are amended for clarity to recite “gun barrel” instead of merely “barrel,” it being clear that throughout this application “barrel” means “gun barrel.” See applicants’ specification, page 3, lines 21-22; page 4, line 21; page 5, lines 3, 4, 6 and 20; and page 7, line 21. Independent claim 1 is further amended for clarity to recite that the three support seats are “supporting said sub-caliber penetrator adjacent the internal surface of said gun barrel,” as illustrated and described in applicants’ Figs. 3a, 3b, 4a and 4b, for example.

This Amendment is believed to place this application fully in condition for allowance, and surely places it in better form for any appeal. Accordingly, entry of this Amendment and allowance of all claims 1-8 are respectfully solicited. And, upon allowance of claim 1, allowance of previously non-elected species claims 9 and 10, which are dependent upon claim 1, is also respectfully requested.

1. A “Replacement Sheet” of drawings, bearing copies of Figs. 1 and 2, each now including a PRIOR ART label, is submitted herewith.

2. Claims 1-4 were rejected under 35 U.S.C. §102(b) over Clarke et al U.S. Patent 4,802,415.

Clarke et al ‘415 discloses telescoped ammunition 10 calibered at the outer diameter of outer case 40 to fit a gun barrel, ammunition 10 including charges 15 and 16, sub-caliber projectile 30, sabot 35, control tube 20 and booster charge 25. Clarke, column 5, lines 6-9 and 15-19, discloses sabot 35 having a piston 38 calibered to the inner diameter of control tube 20, not the gun barrel. Applicants’ specification confirms what those skilled in the art know, that “substantially calibered” means “substantially of the diameter of the gun barrel.” See, specification, page 5, lines 15-20, for example. Piston 38 resides at the rear of control tube 20 and has the caliber (or diameter) of the inner caliber (or diameter) of control tube 20.

Contrary to the statement in the Office Action, page 3, line 2, Clarke's elements do not have a caliber that is "substantially equal" to that of the gun barrel. Clarke's element 38 is sub-calibered, not a support seat having gun barrel caliber as recited in applicants' claims.

For the foregoing reason, Clarke fails to disclose all elements of applicants' claimed invention, and therefore is not a proper basis for rejection under §102. And, there is no disclosure or teaching in Clarke that would have suggested the desirability of modifying any portions thereof effectively to anticipate or suggest applicants' presently claimed invention. Claims 2-4, which depend from claim 1, are allowable for the same reasons explained herein for claim 1. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

3. Claims 1-8 were rejected under 35 U.S.C. §102(b) over Klumpp German Patent DE 003843504.

Klumpp discloses an ammunition that includes both a front sub-caliber penetrator 21 and a rear sub-caliber penetrator 22, the two sub-caliber penetrators supported by two segmented sabots 1 and 2. In contrast, the presently claimed invention is a single sub-caliber penetrator supported by a single gun barrel caliber sabot having at least two axially integral segments.

The sabot recited in applicant's claim 1 is expressly stated to be "surrounding said sub-caliber penetrator." And, it is that same "said sabot" that comprises the at least three support seats recited in applicant's claim 1.

Klumpp's front penetrator 21 is surrounded by first sabot 1, and has only one calibered support seat 11, contrary to applicant's claim 1.

Klumpp's rear penetrator 22 is surrounded by second sabot 2, and does not include a forward support seat having a profile for causing separation of at least two segments from the sabot upon exiting a barrel, as recited in applicant's claim 1. Second sabot 2 surrounding second penetrator 22 and has only two calibered support seats 9 and 12, again contrary to applicants' claim 1.

Accordingly, Klumpp does not disclose a projectile comprising a sub-caliber penetrator with (1) a single gun barrel caliber sabot, the sabot including at least two axially integral segments surrounding the sub-caliber penetrator, and (2) at least three support seat portions of the sabot dimensioned to gun barrel caliber, wherein (3) a forward one of the three seats has a

profile for causing separation of the segments from the sabot upon exiting a barrel, as recited in applicants' claim 1.

For the foregoing reasons, Klumpp fails to disclose all elements of applicants' claimed invention, and therefore is not a proper basis for rejection under §102. And, there is no disclosure or teaching in Klumpp that would have suggested the desirability of modifying any portions thereof effectively to anticipate or suggest applicants' presently claimed invention. Claims 2-8, which depend from claim 1, are allowable for the same reasons explained herein for claim 1. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

4. Claims 1-8 were rejected under 35 U.S.C. §103(a) over Bisping et al U.S. Patent 4,524,695, in view of either Klumpp DE '504 or Clarke et al '415.

The Office Action still effectively admits that Bisping does not disclose a third forward support seat, and cites Klumpp or Clarke as allegedly teaching same.

But, Bisping also does not disclose a projectile having a sub-caliber penetrator with (1) a barrel caliber sabot including at least two segments, each of which is axially integral, which together surround the sub-calibered penetrator, and (2) at least three barrel caliber support seats on the sabot, wherein (3) a forward one of the support seats has a profile for causing separation of the segments of the sabot upon exiting a barrel, as recited in applicants' claim 1.

Klumpp does not teach or suggest ammunition including a single sabot having three, barrel caliber support seats and surrounding a single penetrator, wherein a forward one of the three seats has a profile for causing separation of the segments from the sabot upon exiting a barrel. Also, Klumpp does not teach or suggest that it would be beneficial or desirable to have a single penetrator surrounded by a single sabot having three seats, one of which has such a profile.

Clarke does not disclose three barrel caliber support seats, as explained herein, nor does Clarke teach or suggest that it would be beneficial or desirable to have three seats.

Accordingly, neither Klumpp nor Clarke discloses anything which would cure the deficiencies of Bisping.

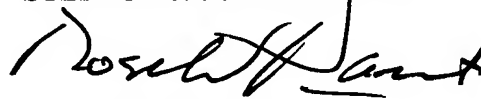
For the foregoing reasons, none of Bisping, Klumpp or Clarke contains any teaching, suggestion, reason, motivation or incentive that would have led one of ordinary skill in the art to

applicants' claimed invention. Nor is there any disclosure or teaching in any of these references that would have suggested the desirability of combining any portions thereof effectively to anticipate or suggest applicants' presently claimed invention. Claims 2-8, which depend from claim 1, are allowable for the same reasons explained herein for claim 1. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

All claims 1-8 are now proper in form and patentably distinguished over all grounds of rejection stated in the Office Action. Accordingly, allowance of all claims 1-8, 9 and 10 is respectfully requested. The Commissioner is hereby authorized to charge/credit any fee deficiencies or overpayments to Deposit Account No. 19-4293 (Order No. 28952.3110). Should the Examiner deem that any further action by the applicants would be desirable to place this application in even better condition for issue, the Examiner is requested to telephone applicants' undersigned representatives.

Respectfully submitted,

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